

# **Exhibit 3**

Case No. 3:20-cv-06754-WHA

Related to Case No. 3:21-cv-07559-WHA

# Sonos v. Google

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Dr. Kevin Almeroth

# What I Was Asked To Analyze

- Infringement
- Damages-Related Technical Issues
- Validity

# Qualifications

## Education



### Georgia Institute of Technology

Ph.D. Computer Science 1997

M.S. Computer Science 1994

B.S. Computer Science 1992

## Academic Appointments



**Professor Emeritus, Dept. of Computer Science**  
UC Santa Barbara (2020-Present)

**Professor, Dept. of Computer Science**  
UC Santa Barbara (1997-2020)

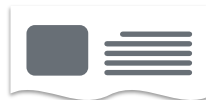
**Vice Chair, Dept. of Computer Science**  
UC Santa Barbara (2001-2005)

**Associate Dean, College of Engineering**  
UC Santa Barbara (2007-2009)

## Research Experience



**25+ years** of experience as a computer networking researcher



**Approximately 200** peer-reviewed publications



**19** released software systems

# Qualifications

## Relevant Experience



### Research themes include:

- Streaming media in the Internet
- Delivery of multimedia content between computing devices
- Wireless networking



### Active in Internet Engineering Task Force (IETF) for 20+ years:

- Developed standards to support multimedia data delivery
- Developed standards to support network monitoring & management

## Industry Collaborations

HITACHI

OCCAM  
NETWORKS

IBM



DF  
Digital Fountain



Redback  
NETWORKS

JUNIPER  
NETWORKS

U.S. AIR FORCE

CISCO

Sprint

PROCKET™  
NETWORKS

## Awards & Honors



- Numerous teaching awards
- Numerous honors and awards for original research



- Recognized as IEEE Fellow

# Overview of '885 and '966 Patents

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SONOS

'885

**(12) United States Patent  
Lambourne****(10) Patent No.: US 10,848,885 B2**  
**(45) Date of Patent: \*Nov. 24, 2020****(54) ZONE SCENE MANAGEMENT****(71) Applicant: SONOS, INC.**, Santa Barbara, CA (US)**(72) Inventor: Robert A. Lambourne**, Santa Barbara, CA (US)**(73) Assignee: Sonos, Inc.**, Santa Barbara, CA (US)**(\*) Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

**(21) Appl. No.: 16/383,561****(22) Filed: Apr. 12, 2019****(65) Prior Publication Data**

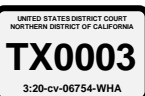
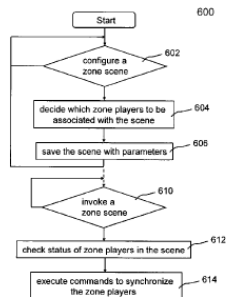
US 2019/0239008 A1 Aug. 1, 2019

**Related U.S. Application Data****(63)** Continuation of application No. 15/130,919, filed on Apr. 15, 2016, which is a continuation of application (Continued)**(51) Int. Cl.**  
**G06F 17/00** (2019.01)  
**H04R 27/00** (2006.01)  
(Continued)**(52) U.S. Cl.**  
**CPC** ..... **H04R 27/00** (2013.01); **G05B 15/02** (2013.01); **G06F 3/0482** (2013.01);  
(Continued)**(58) Field of Classification Search**  
**CPC** .... **H04R 27/00**; **H04R 3/12**; **H04R 2227/005**; **H04R 2430/01**; **G05B 15/02**;  
(Continued)**(56) References Cited**

U.S. PATENT DOCUMENTS

3,956,591 A 5/1976 Gates, Jr.  
4,105,974 A 8/1978 Rogers  
(Continued)**FOREIGN PATENT DOCUMENTS**CA 2320451 A1 3/2001  
CN 1598767 A 3/2005  
(Continued)**OTHER PUBLICATIONS**Yamaha DME Designer 3.5 user manual (Year: 2004).  
(Continued)**Primary Examiner** — Paul C McCord**(57) ABSTRACT**

An example playback device in a first zone of a media playback system receives a first indication that the first zone has been added to a first zone scene including a first preconfigured grouping of zones including the first zone and a second zone. The playback device receives a second indication that the first zone has been added to a second zone scene including a second preconfigured grouping of zones including the first zone and a third zone. After a given one of the first and second zone scenes has been selected for invocation, the playback device receives an instruction to operate in accordance with the given zone scene, and based on the instruction, begins operating in accordance with the given zone scene such that the playback device is configured to play back audio in synchrony with one or more other playback devices in the media playback system.

**20 Claims, 11 Drawing Sheets**

SONOS

'966

**(12) United States Patent  
Lambourne****(10) Patent No.: US 10,469,966 B2**  
**(45) Date of Patent: Nov. 5, 2019****(54) ZONE SCENE MANAGEMENT****(71) Applicant: SONOS, INC.**, Santa Barbara, CA (US)**(72) Inventor: Robert A. Lambourne**, Santa Barbara, CA (US)**(73) Assignee: Sonos, Inc.**, Santa Barbara, CA (US)**(\*) Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.**(21) Appl. No.: 16/383,565****(22) Filed: Apr. 12, 2019****(65) Prior Publication Data**

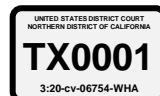
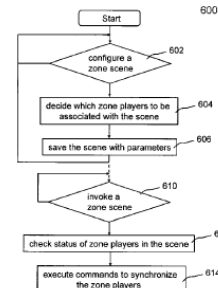
US 2019/0239009 A1 Aug. 1, 2019

**Related U.S. Application Data****(63)** Continuation of application No. 15/130,919, filed on Apr. 15, 2016, which is a continuation of application (Continued)**(51) Int. Cl.**  
**G06F 17/00** (2019.01)  
**H04R 27/00** (2006.01)  
(Continued)**(52) U.S. Cl.**  
**CPC** ..... **H04R 27/00** (2013.01); **G05B 15/02** (2013.01); **G06F 3/0482** (2013.01);  
(Continued)**(58) Field of Classification Search**  
**CPC** .... **H04R 27/00**; **H04R 3/12**; **H04R 2227/005**; **H04R 2430/01**; **G05B 15/02**;  
(Continued)**(56) References Cited**

U.S. PATENT DOCUMENTS

3,956,591 A 5/1976 Gates, Jr.  
4,105,974 A 8/1978 Rogers  
(Continued)**FOREIGN PATENT DOCUMENTS**CA 2320451 A1 3/2001  
CN 1598767 A 3/2005  
(Continued)**OTHER PUBLICATIONS**Yamaha DME Designer 3.5 user manual (Year: 2004).  
(Continued)**Primary Examiner** — Paul C McCord**(57) ABSTRACT**

An example computing device in a media playback system receives a first request to create a first zone scene including a first preconfigured grouping of zones including a first zone and a second zone, and based on the first request, causes creation and storage of the first zone scene. The computing device receives a second request to create a second zone scene including a second preconfigured grouping of zones including the first zone and a third zone, and based on the second request, causes creation and storage of the second zone scene. While displaying a representation of the first zone scene and a representation of the second zone scene, the computing device receives a third request to invoke the first zone scene, and based on the third request, causes the first zone scene to be invoked such that the first zone and the second zone become configured for synchronous playback of media.

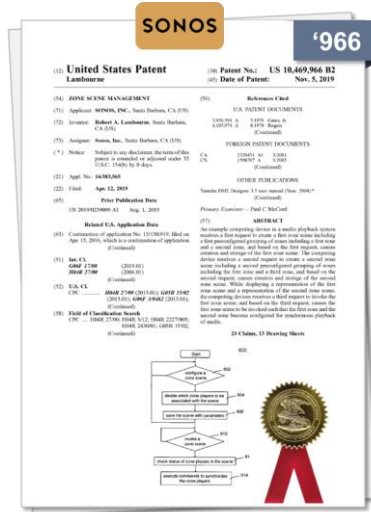
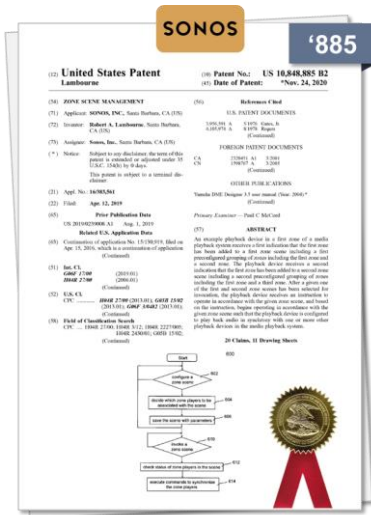
**20 Claims, 13 Drawing Sheets**

# Agreed Claim Constructions

Claim Term	Sonos Patents	Court's Construction
"zone scene"	'885 Patent '966 Patent	<b>"a previously-saved grouping of zone players according to a common theme"</b>
"indication that the first zone player has been added to a ... zone scene"	'885 Patent	<b>"indication from the network device that the zone player has been added by the user to a zone scene"</b>



Zone Scene" Patents

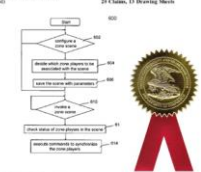


'885

[illegible]

'966

United States Patent Lamberson		(40) Patent No. US 10,464,966 B2 (54) Date of Patent: Nov. 5, 2019
(52) <b>CLASSIFICATION</b>		(51) <b>International Class.</b>
(A) ZONE SCENE MANAGEMENT		(B) REFERENCE CITED
(1) Applicant: WOODEN, INC., Santa Barbara, CA (US)	(2) Inventor: WOODEN, INC., Santa Barbara, CA (US)	(C) U.S. PATENT DOCUMENTS
(3) Inventor: Robert A. Lamberson, Santa Barbara, CA (US)	(4) Inventor: James E. Wood, Santa Barbara, CA (US)	(D) FOREIGN PATENT DOCUMENTS
(5) Title: System to facilitate the detection of the location of a vehicle in a zone	(6) Name of the Invention:	(E) OTHER REFERENCES
(7) Agent: Law: 16/164,966	(8) Name of the Invention:	(F) OTHER REFERENCES
(9) Filed: Aug. 12, 2019	(10) Publication Date:	(11) Name of the Invention: 16/164,966
(12) Filed: Aug. 12, 2019	(13) Publication Date:	(14) Name of the Invention: 16/164,966
(15) International Class. (IPC) Class: 2019.01.01		(16) Name of the Invention: 16/164,966
(17) Name of the Invention: 16/164,966		(18) Name of the Invention: 16/164,966
(19) Name of the Invention: 16/164,966		(20) Name of the Invention: 16/164,966
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(73) Name of the Invention: 16/164,966		(74) Name of the Invention: 16/164,966
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(99) Name of the Invention: 16/164,966		(100) Name of the Invention: 16/164,966



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ported from a member (e.g., a controller) to other members in the scene so that the players are caused to synchronize an operation configured in the scene. The operation may cause all players to play back a song in identical or different volumes or to play back a pre-stored file.

One of the features, benefits and advantages in the present invention is to allow sets of related devices (controllers and operating components) to exist as a group without interfering with other components that are potentially visible on the same wired or wireless network. Each of the sets is configured to a theme or a scene.

FIG. 7 shows an example user interface for invoking a zone scene. The user interface of FIG. 7 shows a Zone Menu that includes selectable indications of zone scenes.

FIG. 8 shows another example user interface for invoking a zone scene. FIG. 8 shows a Zone Menu that includes a softkey indicating a Scenes menu. Pressing the Scenes softkey will show the Scenes menu where all the available zone scenes are shown as selectable indications.

The present invention has been described in sufficient detail with a certain degree of particularity. It is understood that those skilled in the art that the present disclosure of embodiments has been made by way of examples only and that numerous changes in the arrangement and combination of parts may be resorted without departing from the spirit and scope of the invention as claimed. While the embodiments discussed herein may appear to include some limitations as to the presentation of the information units, in terms of the format and arrangement, the invention has applicability well beyond such embodiment, which can be appreciated by those skilled in the art. Accordingly, the scope of the present invention is defined by the appended claims rather than the foregoing description of embodiments.

**I claim:**

1. A first zone player comprising:  
a network interface that is configured to communicatively couple the first zone player to at least one data network;  
one or more processors;  
a non-transitory computer-readable medium; and  
program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players;

(i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

(ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

2. The first zone player of claim 1, wherein the instruction to operate in accordance with the given one of the first and second zone scenes comprises an instruction to operate in accordance with the first zone scene, and

wherein transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players comprises transitioning from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to play back output media in synchrony with output of media by at least the second zone player.

3. The first zone player of claim 2, wherein the instruction is a first instruction, and wherein the first zone player further comprises program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

while operating in accordance with the first predefined grouping of zone players, receiving, from the network device over the data network, a second instruction to operate in accordance with the second predefined grouping of zone players; and

based on the second instruction, (a) ceasing to operate in accordance with the first predefined grouping of zone players such that the first zone player is no longer configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player and (b) beginning to operate in accordance with the second predefined grouping of zone players such that the first zone player is configured to coordinate with at least the third zone player to output media in synchrony with output of media by at least the third zone player.

4. The first-zone player of claim 2, wherein the first zone scene data further comprises an indication of predetermined media to be played when the first zone scene is invoked, and wherein the first zone player further comprises program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

# 885 Patent, Claim 1

**[1.0]** A first zone player comprising:

**[1.1]** a network interface that is configured to communicatively couple the first zone player to at least one data network;

**[1.2]** one or more processors;

**[1.3]** a non-transitory computer-readable medium; and

**[1.4]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

**[1.5]** while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

**[1.6]** (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

**[1.7]** (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

**[1.8]** after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

**[1.9]** after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

**[1.10]** based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

# 885 Patent, Claim 1

**[1.0]** A first zone player comprising:

**[1.1]** a network interface that is configured to communicatively couple the first zone player to at least one data network;

**[1.2]** one or more processors;

**[1.3]** a non-transitory computer-readable medium; and

**[1.4]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

**[1.5]** while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

**[1.6]** (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

**[1.7]** (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

**[1.8]** after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

**[1.9]** after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

**[1.10]** based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

# 885 Patent, Claim 1

**[1.0]** A first zone player comprising:

**[1.1]** a network interface that is configured to communicatively couple the first zone player to at least one data network;

**[1.2]** one or more processors;

**[1.3]** a non-transitory computer-readable medium; and

**[1.4]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

**[1.5]** while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

**[1.6]** (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

**[1.7]** (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

**[1.8]** after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

**[1.9]** after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

**[1.10]** based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

# 885 Patent, Claim 1

[1.0] A first zone player comprising:

[1.1] a network interface that is configured to communicatively couple the first zone player to at least one data network;

[1.2] one or more processors;

[1.3] a non-transitory computer-readable medium; and

[1.4] program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

**[1.5]** while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

**[1.6]** (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

**[1.7]** (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

**[1.8]** after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

[1.9] after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

[1.10] based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.



# 885 Patent, Claim 1

[1.0] A first zone player comprising:

[1.1] a network interface that is configured to communicatively couple the first zone player to at least one data network;

[1.2] one or more processors;

[1.3] a non-transitory computer-readable medium; and

[1.4] program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

[1.5] while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

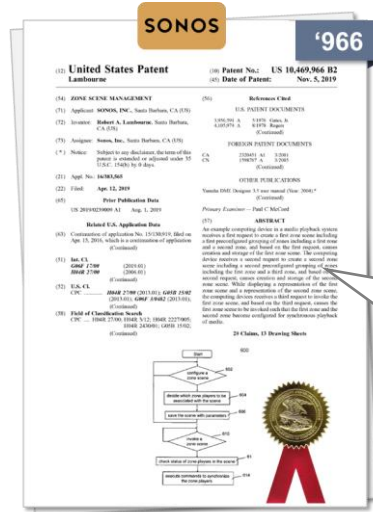
[1.6] (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

[1.7] (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

[1.8] after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

[1.9] after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

[1.10] based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.



7. The computing device of claim 1, further comprising program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:



# 966 Patent, Claim 1

**[1.0]** A computing device comprising:

**[1.1]** one or more processors;

**[1.2]** a non-transitory computer-readable medium; and

**[1.3]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:

**[1.4]** while serving as a controller for a networked media playback system comprising a first zone player and at least two other zone players, wherein the first zone player is operating in a standalone mode in which the first zone player is configured to play back media individually:

**[1.5]** receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;

**[1.6]** based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene;

**[1.7]** receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player;

**[1.8]** based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene;

**[1.9]** displaying a representation of the first zone scene and a representation of the second zone scene; and

**[1.10]** while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and

**[1.11]** based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.

# 966 Patent, Claim 1

**[1.0]** A computing device comprising:

**[1.1]** one or more processors;

**[1.2]** a non-transitory computer-readable medium; and

**[1.3]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:

**[1.4]** while serving as a controller for a networked media playback system comprising a first zone player and at least two other zone players, wherein the first zone player is operating in a standalone mode in which the first zone player is configured to play back media individually:

**[1.5]** receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;

**[1.6]** based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene;

**[1.7]** receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player;

**[1.8]** based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene;

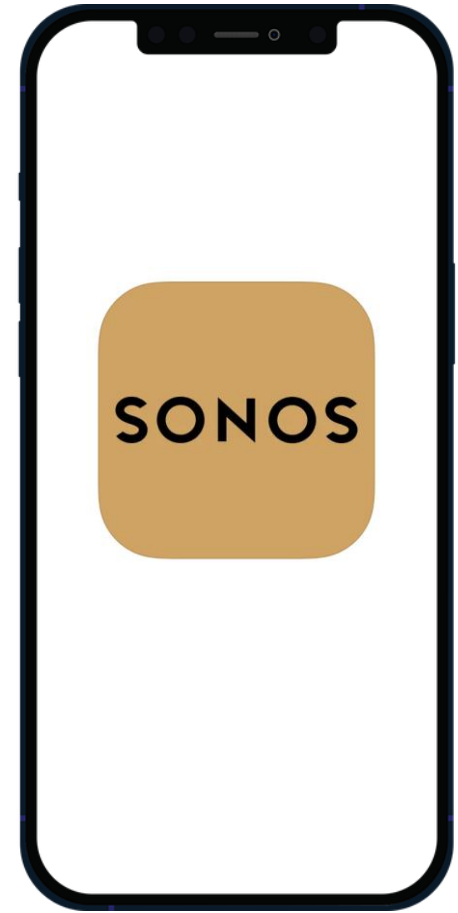
**[1.9]** displaying a representation of the first zone scene and a representation of the second zone scene; and

**[1.10]** while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and

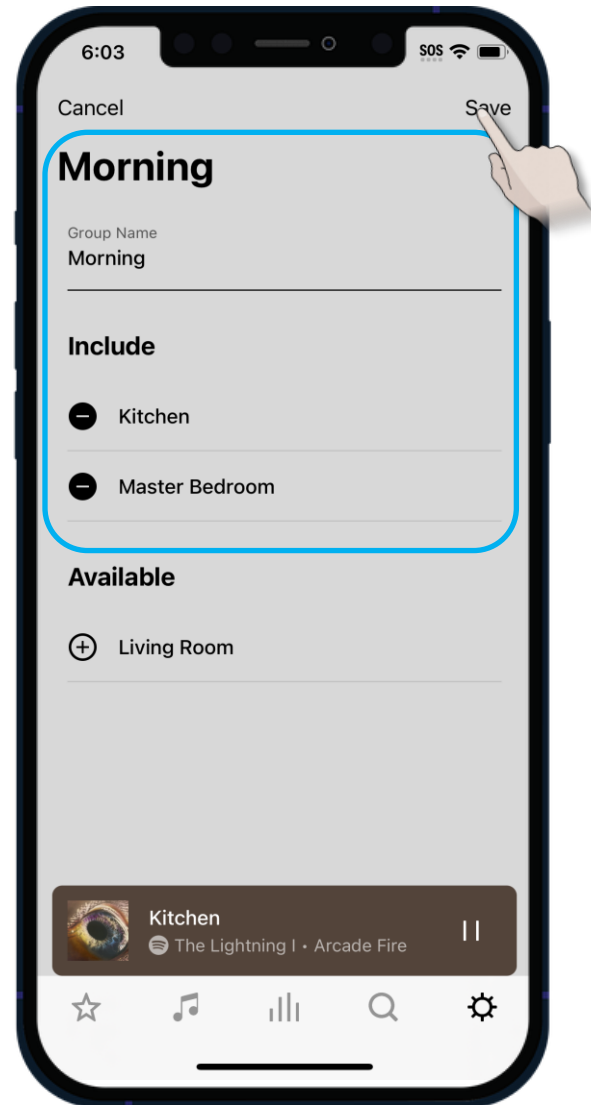
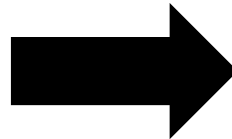
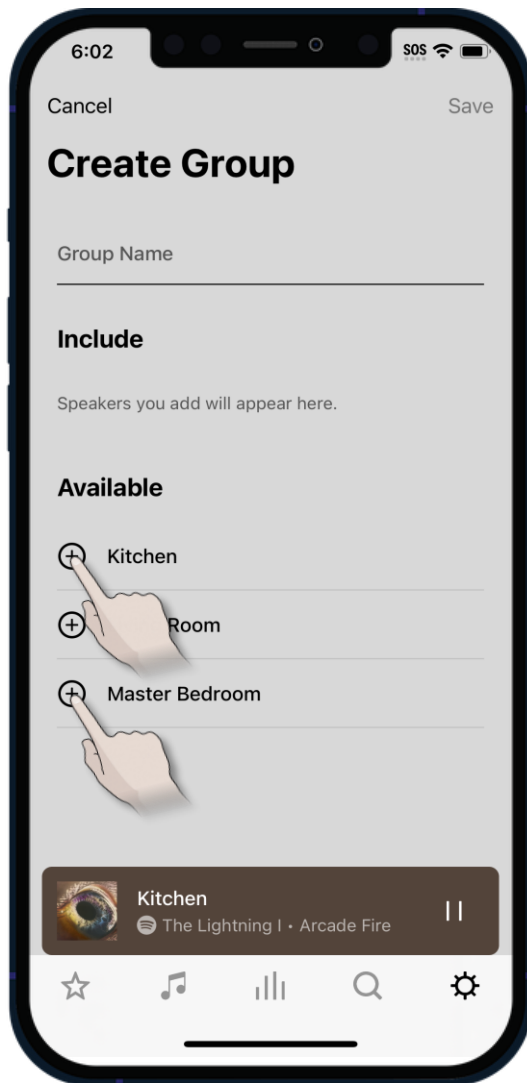
**[1.11]** based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.

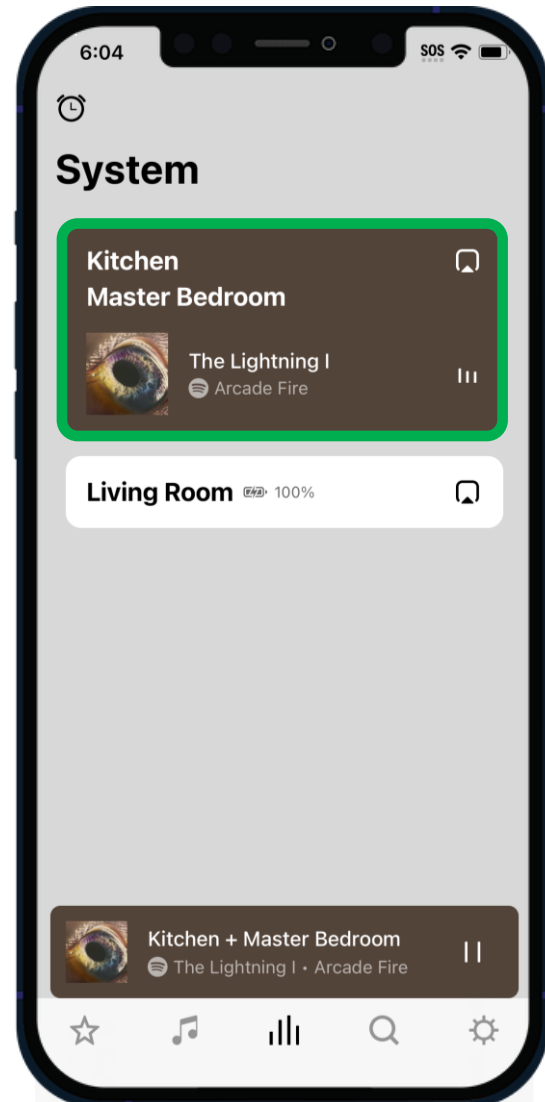
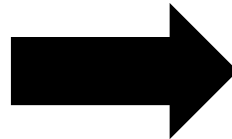
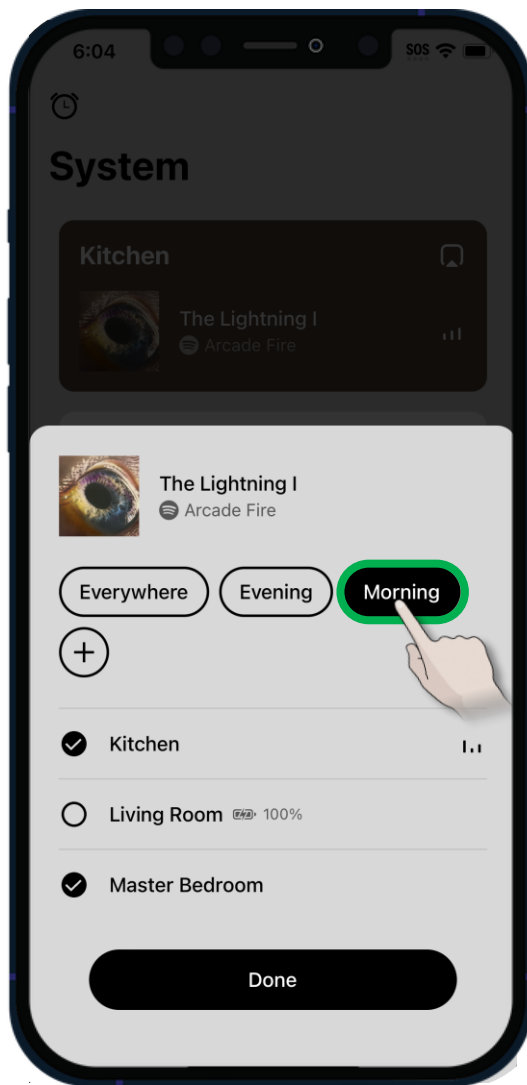
# Sonos's Current "Zone Scene" Grouping

Case 3:20-cv-06754-WHA Document 754-4 Filed 05/18/23 Page 19 of 88



SONOS







**Nest  
Audio**



**Nest  
Mini**



**Nest  
Hub**



**Nest  
Hub Max**



**Nest Wifi  
Point**



**Chromecast**



**Chromecast  
Ultra**



**Chromecast with  
Google TV**



**Home**

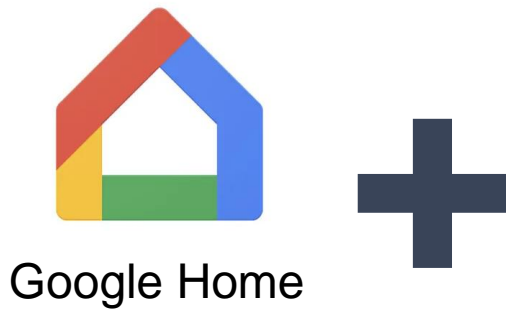


**Home Mini**



**Home  
Max**





## Representative Computing Devices



Google Pixel  
Phones



Google Pixel  
Tablets



Google  
Pixelbooks



Apple



Samsung



Motorola



OnePlus



Lenovo



HP



Acer



Asus

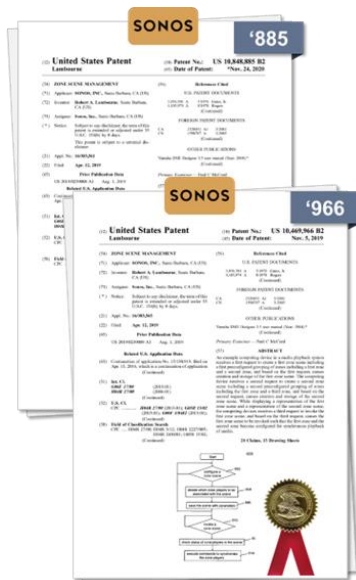
# Infringement – Methodology

## Step 1

**Consider** the claims and their meaning, including the Court's claim constructions

## Step 2

**Compare** construed patent claims to Google's products to determine if they meet the elements of the claims



?




Google



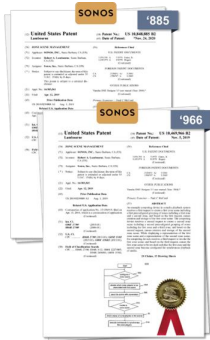


# Agreed Claim Constructions

Claim Term	Sonos Patents	Agreed Construction
"zone scene"	'885 Patent '966 Patent	<b>"a previously-saved grouping of zone players according to a common theme"</b>
"indication that the first zone player has been added to a ... zone scene"	'885 Patent	<b>"indication from the network device that the zone player has been added by the user to a zone scene"</b>

A woman with dark hair and glasses is looking at a computer screen. The screen displays various data visualizations, including bar charts, line graphs, and circular progress indicators. The background is slightly blurred, focusing attention on the woman and the data.

**A person having the equivalent of a 4-year degree from an accredited institution (typically denoted as a B.S. degree) in computer science, computer engineering, electrical engineering, or an equivalent thereof, and approximately 2-4 years of professional experience in the fields of networking and network-based systems or applications, such as consumer audio systems, or an equivalent level of skill, knowledge, and experience.**



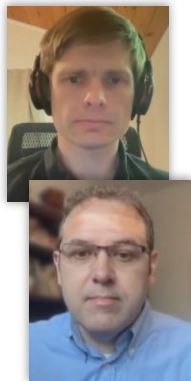
## Sonos Patent Documents

- '885 and '966 Patents
- File History
- Claim Constructions



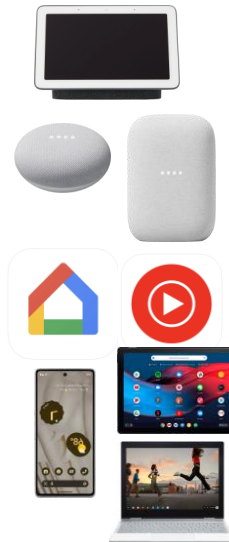
## Google Documents

- Customer-Facing Literature
- Internal Documents
- Google Source Code



## Sworn Testimony & Admissions

- Kenneth MacKay, Google Senior Software Engineer
- Justin Pedro, Engineer Manager
- Google's Response to Sonos's Interrogatory No. 13



## Google System Testing

- Google Nest Hub Display
- Google Home Mini Speaker
- Google Nest Audio Speaker
- Google Pixel 7 + Google Home, Google YouTube Music, and Spotify Apps
- Google Pixelbook + Google Home, YouTube Music, and Spotify Apps
- iPhone 12 Pro + Google Home, YouTube Music, and Spotify Apps

# Infringement – Assignment

**Asserted Claims**

**Accused Google Products**

**Version**

**Google**  
**Infringes?**

**'885 Patent**  
**Claim 1**



**Prior Versions**  
**(Nov. 2020 – Present)**

**?**

**[1.0]** A first zone player comprising:

**[1.1]** a network interface that is configured to communicatively couple the first zone player to at least one data network;

**[1.2]** one or more processors;

**[1.3]** a non-transitory computer-readable medium; and

**[1.4]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

**[1.5]** while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

**[1.6]** (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

**[1.7]** (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

**[1.8]** after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

**[1.9]** after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

**[1.10]** based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

- [1.0]** A first zone player comprising:
- [1.1]** a network interface that is configured to communicatively couple the first zone player to at least one data network;
- [1.2]** one or more processors;
- [1.3]** a non-transitory computer-readable medium; and
- [1.4]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

**[1.5]** while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

**[1.6]** (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

**[1.7]** (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

**[1.8]** after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

**[1.9]** after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

**[1.10]** based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.



**[1.0]** A first zone player comprising:

**[1.1]** a network interface that is configured to communicatively couple the first zone player to at least one data network;

**[1.2]** one or more processors;

**[1.3]** a non-transitory computer-readable medium; and

**[1.4]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

**[1.5]** while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least one other zone player:

**[1.6]** (i) receiving, from a network device over the data network, a first indication that the first zone player has been added to a first zone scene comprising the first zone player and at least one other zone player including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;

**[1.7]** (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

**[1.8]** after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

**[1.9]** after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

**[1.10]** based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.



# Infringement – Assignment

**Asserted Claims**

**Accused Google Products**

**Version**

**Google**  
**Infringes?**

**'885 Patent**  
**Claim 1**



**Prior Versions**  
**(Nov. 2020 – Present)**



# Infringement – Assignment

## Asserted Claims

## Accused Google Products

## Version

**Google**  
Infringes?

**'885 Patent**  
Claim 1



**Prior Versions**  
(Nov. 2020 – Present)



**'966 Patent**  
Claims  
1, 2, 4, 6, 8



Google

### Representative Computing Devices



**Prior Versions**  
(Nov. 2019 – Present)



**[1.0]** A computing device comprising:

**[1.1]** one or more processors;

**[1.2]** a non-transitory computer-readable medium; and

**[1.3]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:

**[1.4]** while serving as a controller for a networked media playback system comprising a first zone player and at least two other zone players, wherein the first zone player is operating in a standalone mode in which the first zone player is configured to play back media individually;

**[1.5]** receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;

**[1.6]** based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene;

**[1.7]** receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player;

**[1.8]** based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene;

**[1.9]** displaying a representation of the first zone scene and a representation of the second zone scene; and

**[1.10]** while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and

**[1.11]** based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.

**[1.0]** A computing device comprising:

**[1.1]** one or more processors;

**[1.2]** a non-transitory computer-readable medium; and

**[1.3]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:

**[1.4]** while serving as a controller for a networked media playback system comprising a first zone player and at least two other zone players, wherein the first zone player is operating in a standalone mode in which the first zone player is configured to play back media individually;

**[1.5]** receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;

**[1.6]** based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene;

**[1.7]** receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player;

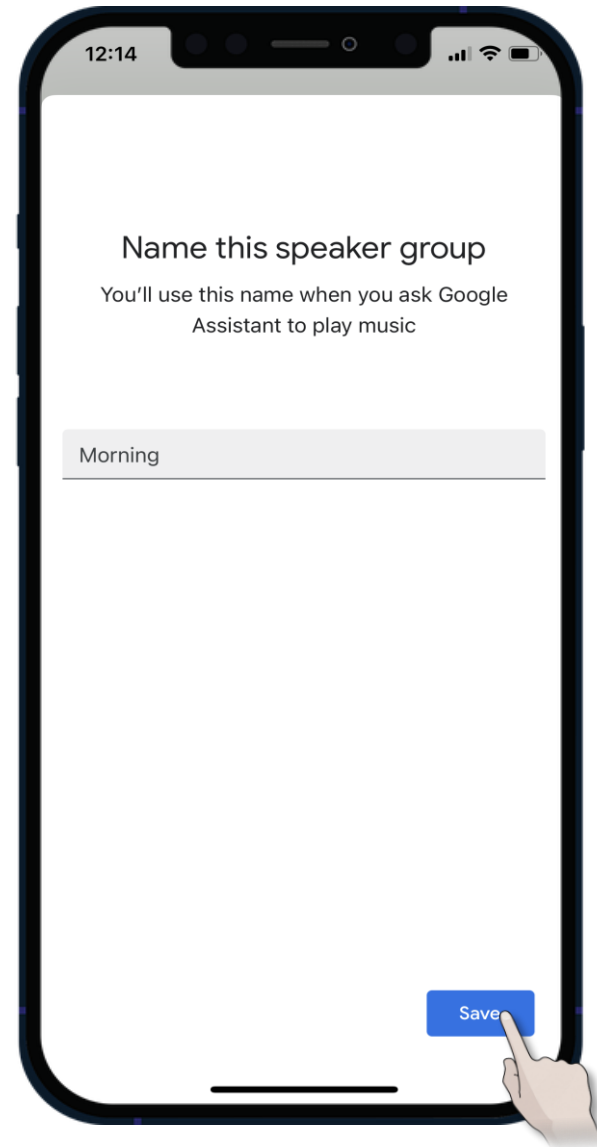
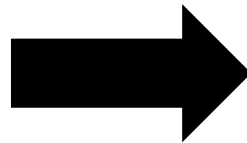
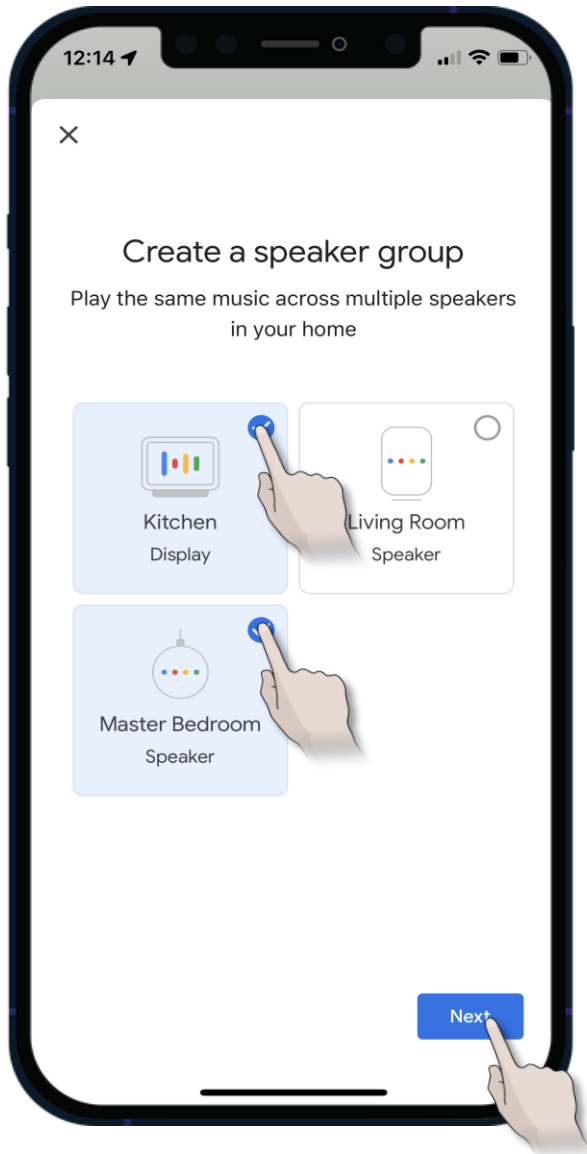
**[1.8]** based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene;

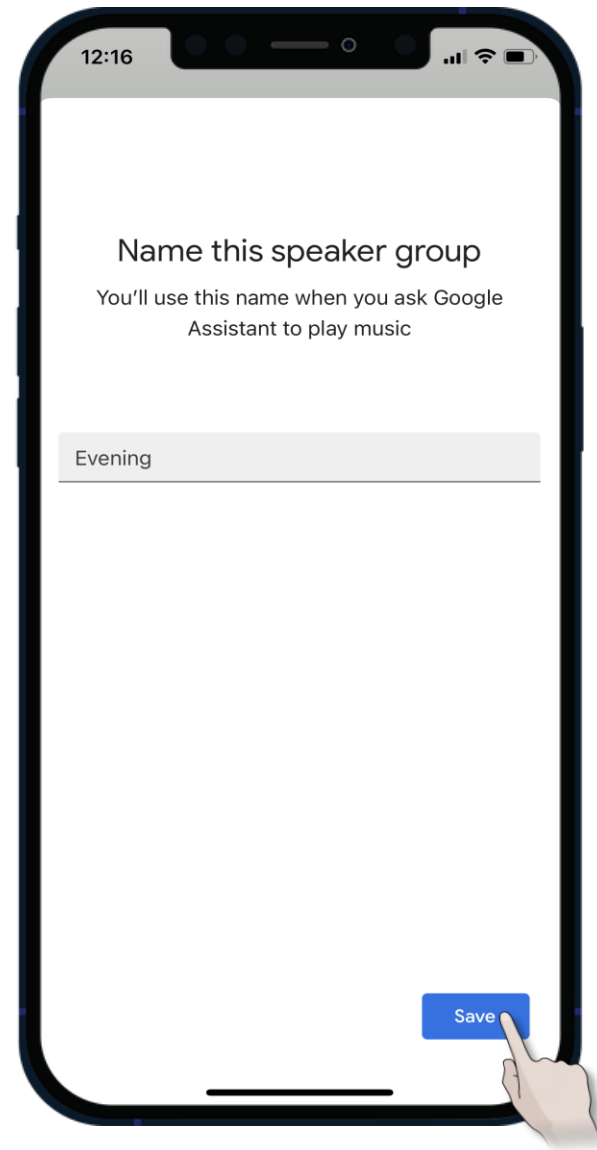
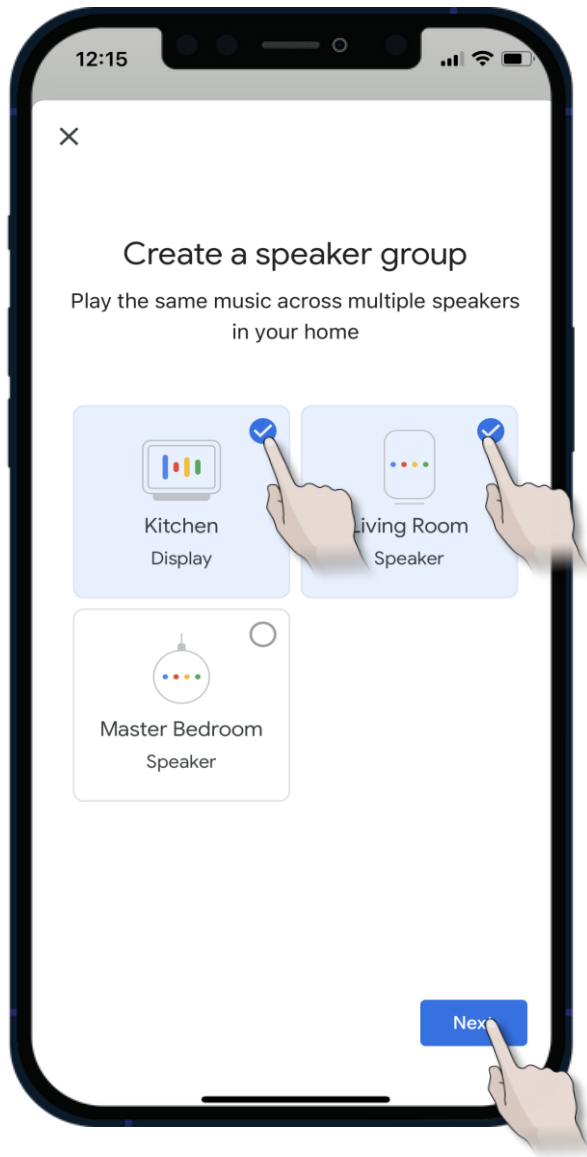
**[1.9]** displaying a representation of the first zone scene and a representation of the second zone scene; and

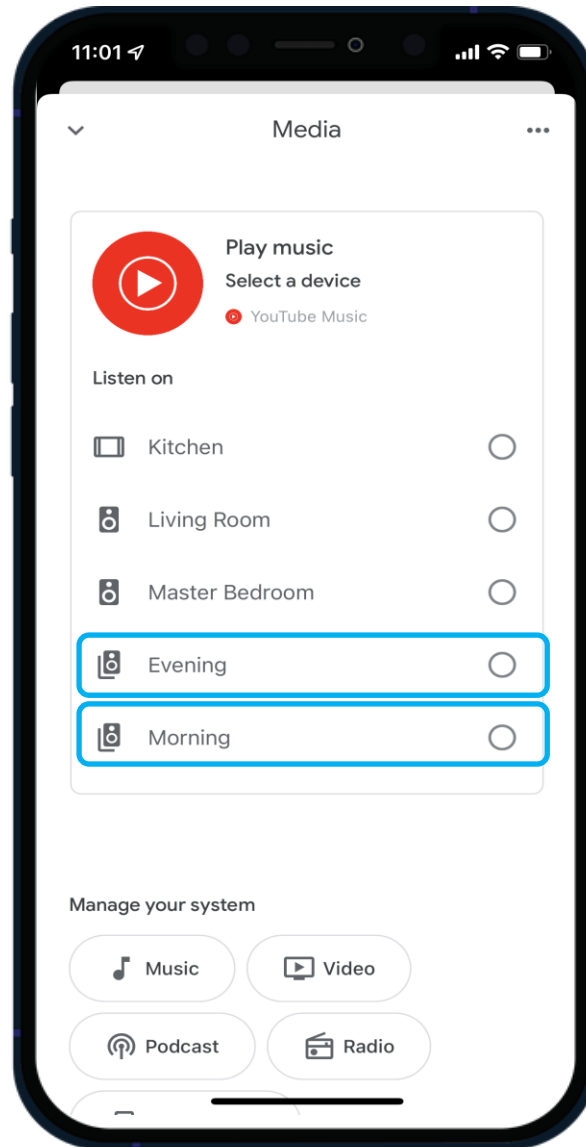
**[1.10]** while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and

**[1.11]** based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.









**[1.0]** A computing device comprising:

**[1.1]** one or more processors;

**[1.2]** a non-transitory computer-readable medium; and

**[1.3]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:

**[1.4]** while serving as a controller for a networked media playback system comprising a first zone player and at least two other zone players, wherein the first zone player is operating in a standalone mode in which the first zone player is configured to play back media individually;

**[1.5]** receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;

**[1.6]** based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene;

**[1.7]** receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player;

**[1.8]** based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene;

**[1.9]** displaying a representation of the first zone scene and a representation of the second zone scene; and

**[1.10]** while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and

**[1.11]** based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.





**[1.0]** A computing device comprising:

**[1.1]** one or more processors;

**[1.2]** a non-transitory computer-readable medium; and

**[1.3]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:

**[1.4]** while serving as a controller for a networked media playback system comprising a first zone player and at least two other zone players, wherein the first zone player is operating in a standalone mode in which the first zone player is configured to play back media individually;

**[1.5]** receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;

**[1.6]** based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene;

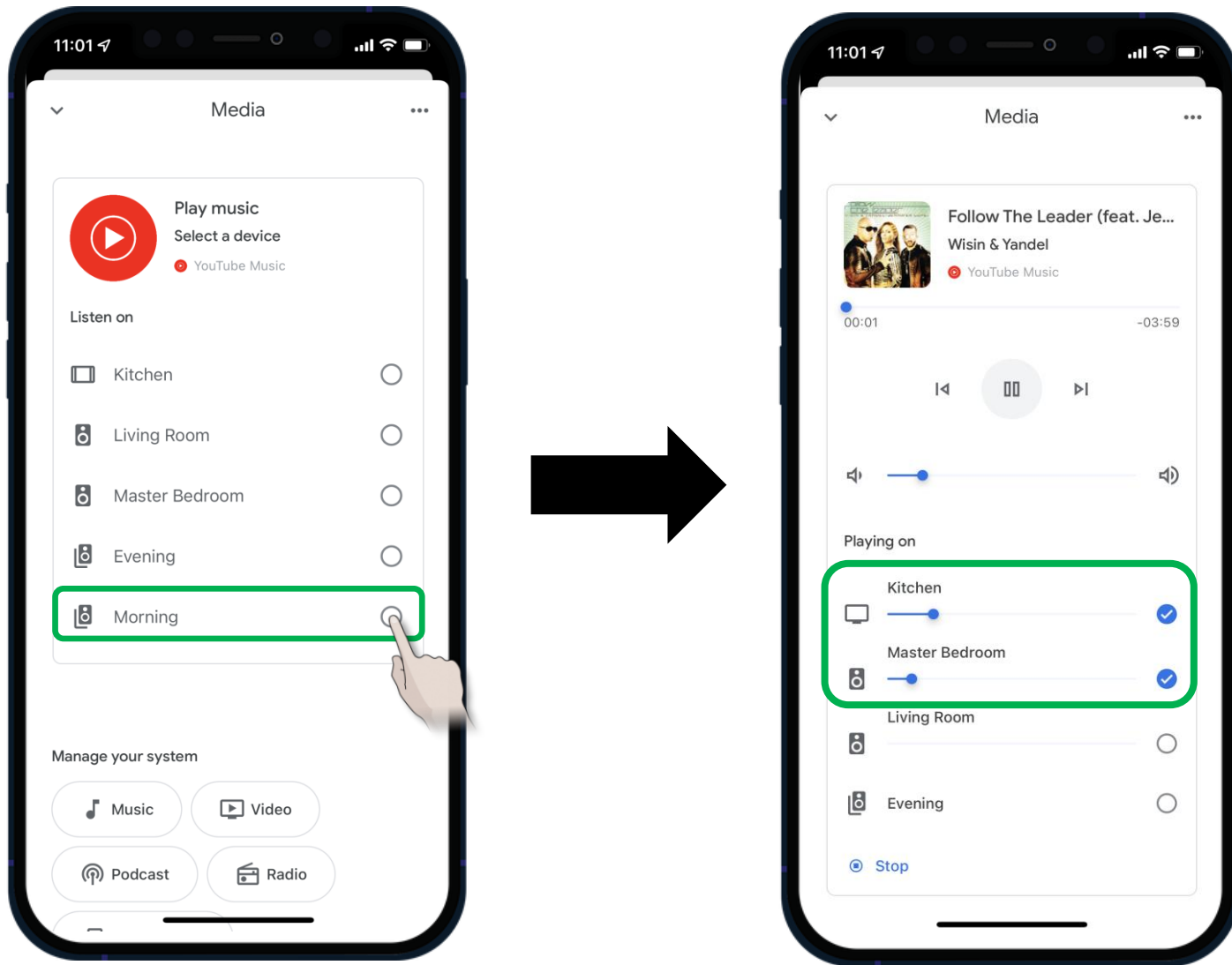
**[1.7]** receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player;

**[1.8]** based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene;

**[1.9]** displaying a representation of the first zone scene and a representation of the second zone scene; and

**[1.10]** while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and

**[1.11]** based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.



**[1.0]** A computing device comprising:

**[1.1]** one or more processors;

**[1.2]** a non-transitory computer-readable medium; and

**[1.3]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:

**[1.4]** while serving as a controller for a networked media playback system comprising a first zone player and at least two other zone players, wherein the first zone player is operating in a standalone mode in which the first zone player is configured to play back media individually;

**[1.5]** receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;

**[1.6]** based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene;

**[1.7]** receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player;

**[1.8]** based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene;

**[1.9]** displaying a representation of the first zone scene and a representation of the second zone scene; and

**[1.10]** while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and

**[1.11]** based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.

**[1.0]** A computing device comprising:

**[1.1]** one or more processors;

**[1.2]** a non-transitory computer-readable medium; and

**[1.3]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:

**[1.4]** while serving as a controller for a networked media playback system comprising at least one first zone player and at least two other zone players, wherein the first zone player is operating in a standalone mode in which the first zone player is configured to play back media individually;

**[1.5]** receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and at least one second zone player that is configured for synchronous playback of media when the first zone player is in the first zone scene;

**[1.6]** based on the first request, causing an indication of the first zone scene to be transmitted to the first zone player, causing the first zone player to be configured for synchronous playback of media when the first zone player is in the first zone scene;

**[1.7]** receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that is configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different from the first zone player;

**[1.8]** based on the second request, i) causing an indication of the second zone scene to be transmitted to the first zone player, and ii) causing storage of the second zone scene;

**[1.9]** displaying a representation of the first zone scene and a representation of the second zone scene; and

**[1.10]** while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and

**[1.11]** based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.

**INFRINGED**



## '966 Patent, Claim 2

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**[2.0]** The computing device of claim 1, further comprising program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:

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**[2.1]** while the first zone player is configured to coordinate with at least the second zone player to play back media in synchrony with at least the second zone player, receiving a fourth request to invoke the second zone scene; and

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**[2.2]** based on the fourth request, causing the first zone player to (a) cease to operate in accordance with the first predefined grouping of zone players such that the first zone player is no longer configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player and (b) begin to operate in accordance with the second predefined grouping of zone players such that the first zone player is configured to coordinate with at least the third zone player to output media in synchrony with output of media by at least the third zone player.

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## '966 Patent, Claim 3

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**[3.0]** The computing device of claim 1,



---

**[3.1]** wherein causing storage of the first zone scene comprises causing storage of the first zone scene at a location other than the computing device, and



---

**[3.2]** wherein causing storage of the second zone scene comprises causing storage of the second zone scene at the location other than the computing device.

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## '966 Patent, Claim 4

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**[4.0]** The computing device of claim 3,



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**[4.1]** wherein the location other than the computing device comprises a zone player of the first predefined grouping of zone players.

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# Infringement of '966 Patent, Claims 6 and 8 - Prior Versions

## '966 Patent, Claim 6

**[6.0]** The computing device of claim 1,



**[6.1]** wherein the first predefined grouping of zone players does not include the third zone player, and



**[6.2]** wherein the second predefined grouping of zone players does not include the second zone player.



## '966 Patent, Claim 8

**[8.0]** The computing device of claim 1,



**[8.1]** wherein receiving the first request comprises receiving a first set of one or more inputs via a user interface of the computing device,



**[8.2]** wherein receiving the second request comprises receiving a second set of one or more inputs via the user interface, and



**[8.3]** wherein receiving the third request comprises receiving a third set of one or more inputs via the user interface.



# Infringement – Assignment

## Asserted Claims

## Accused Google Products

## Version

**Google**  
Infringes?

**'885 Patent**  
Claim 1



**Prior Versions**  
(Nov. 2020 – Present)



**'966 Patent**  
Claims  
1, 2, 4, 6, 8



**Google**

### Representative Computing Devices



**Prior Versions**  
(Nov. 2019 – Present)







# Infringement – Assignment

## Asserted Claims

## Accused Google Products

## Version

Google  
Infringes?

### '885 Patent Claim 1



**Prior Versions**  
(Nov. 2020 – Present)

**New Version**  
(Dec. 2022 – Present)



### '966 Patent Claims 1, 2, 4, 6, 8



Google

#### Representative Computing Devices



**Prior Versions**  
(Nov. 2019 – Present)

**New Version**  
(Dec. 2022 – Present)



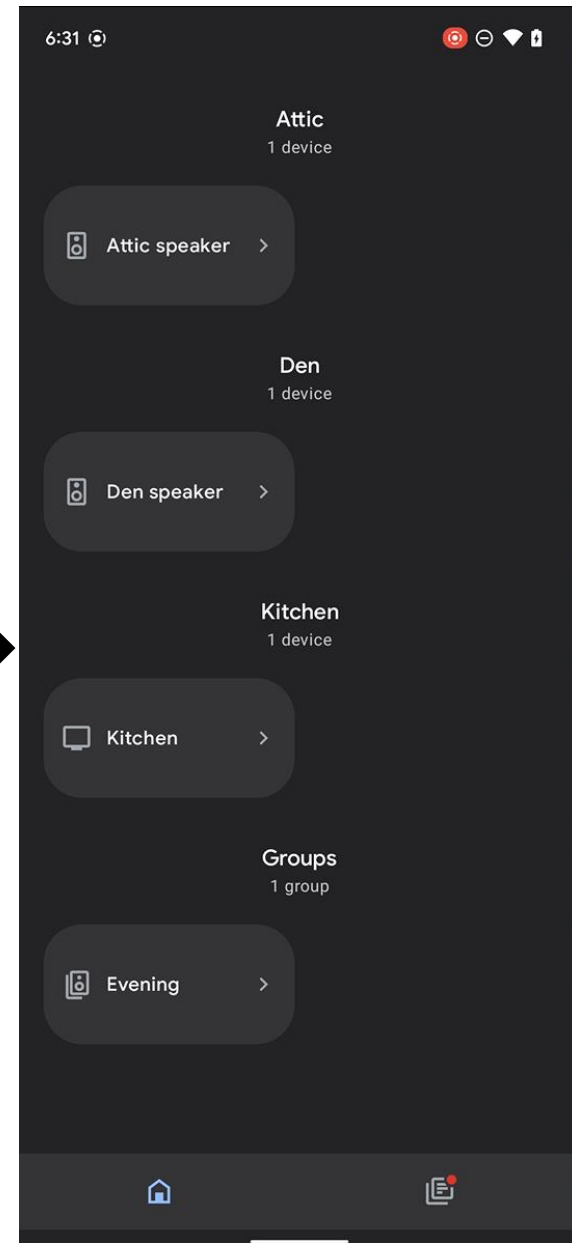
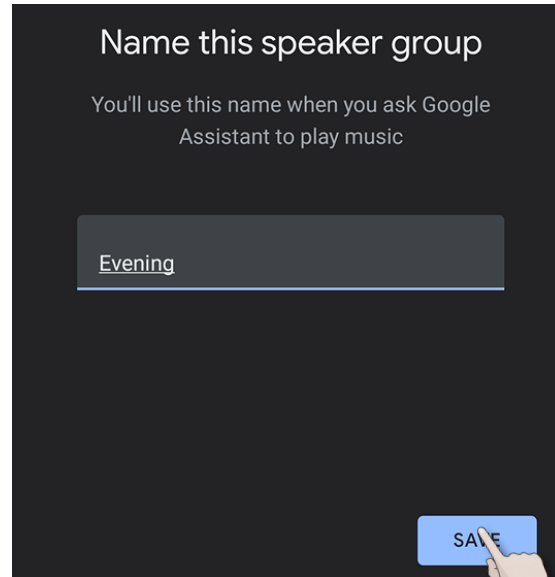
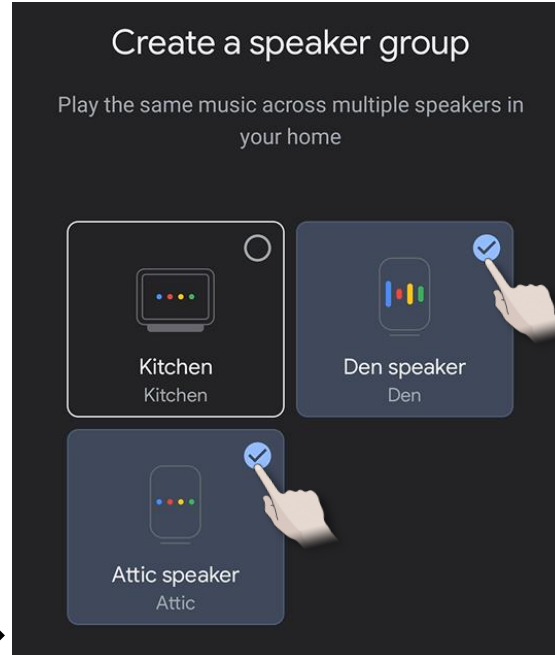
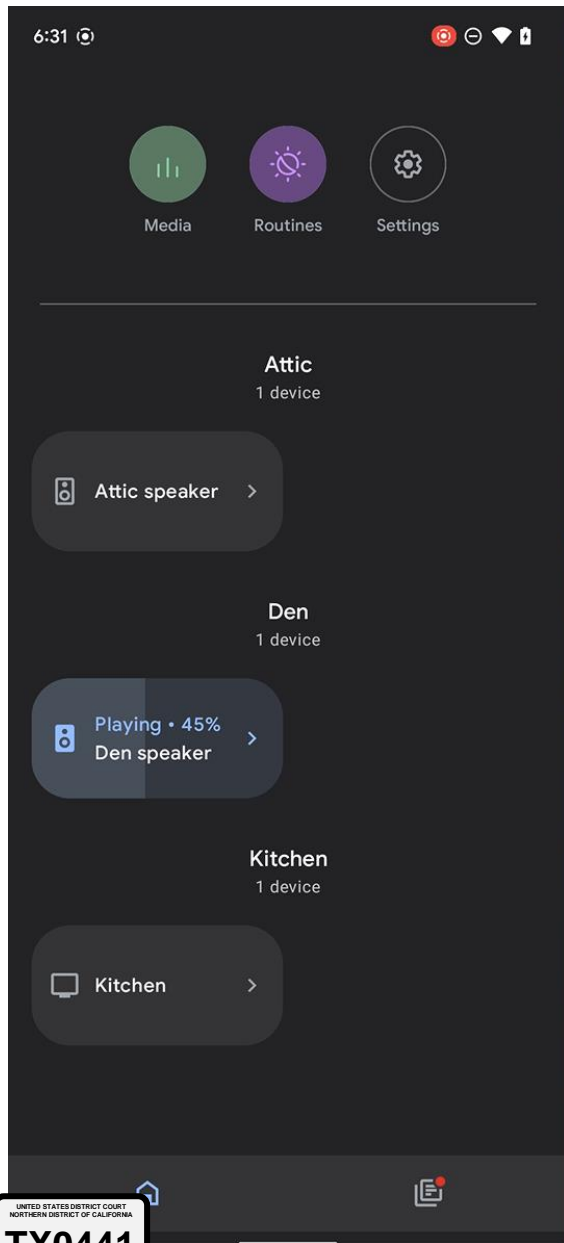
# Infringement – New Version

Google

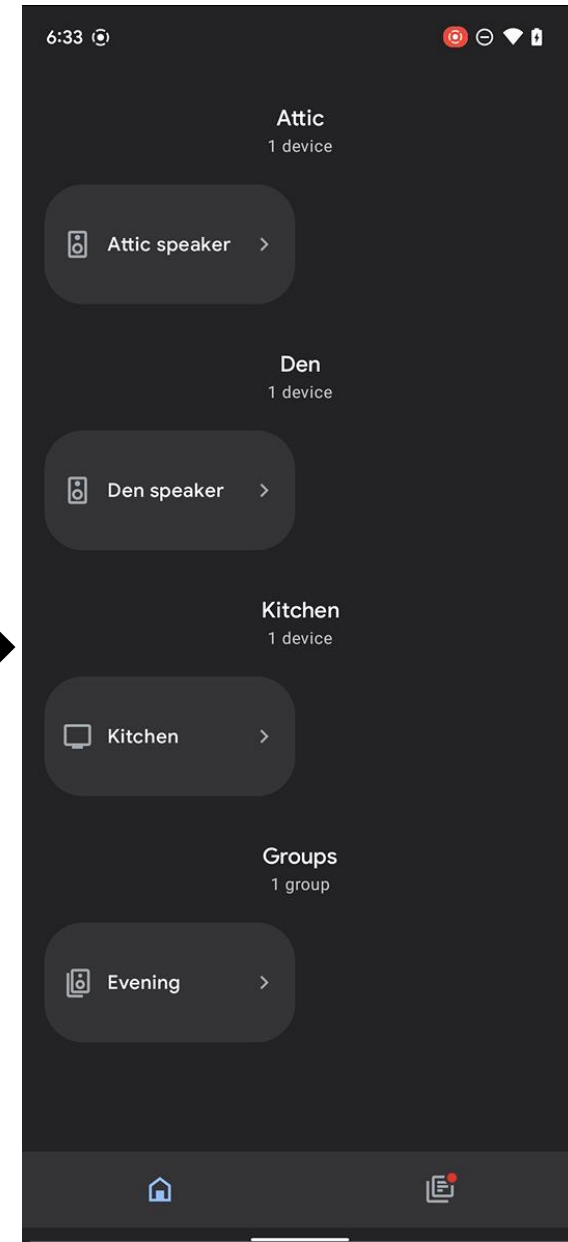
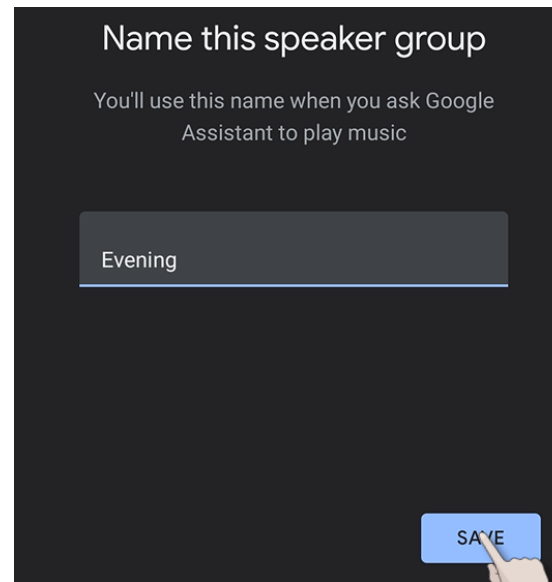
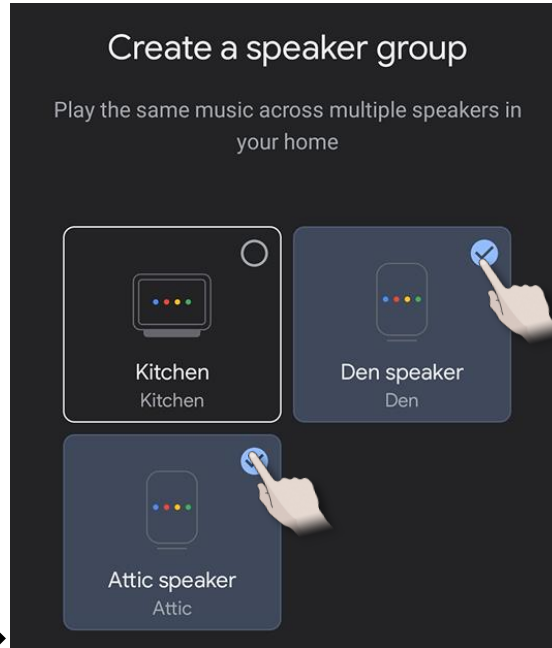
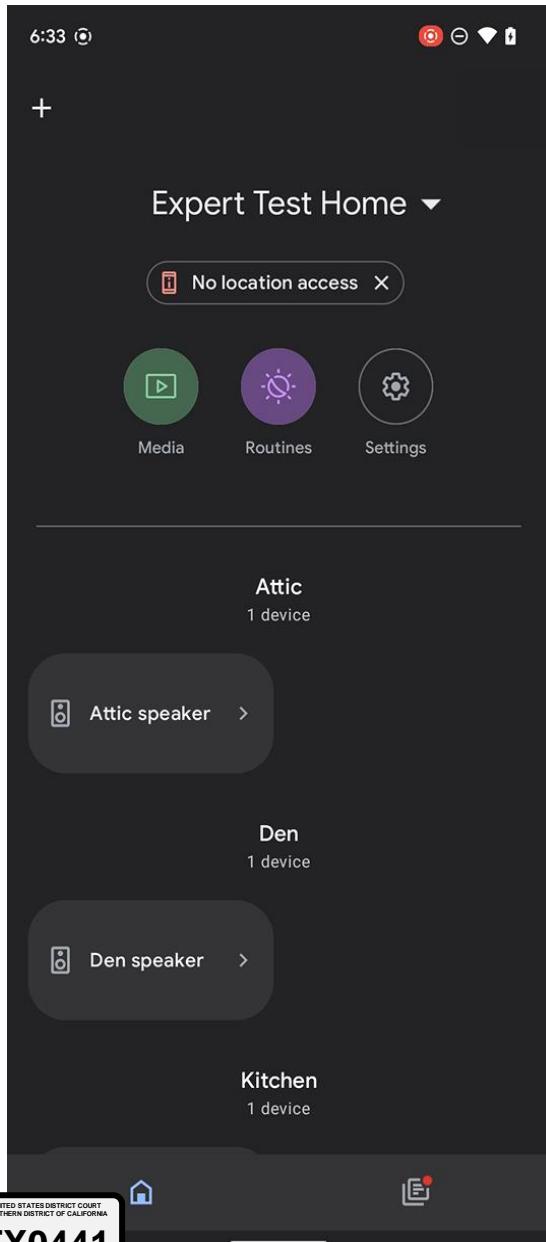


**Kenneth MacKay**  
Google Senior Software Engineer

# Infringement – New Version



# Infringement – New Version



# Infringement – Assignment

## Asserted Claims

## Accused Google Products

## Version

**Google**  
Infringes?

**'885 Patent**  
Claim 1



**Prior Versions**  
(Nov. 2020 – Present)

**New Version**  
(Dec. 2022 – Present)



**'966 Patent**  
Claims  
1, 2, 4, 6, 8



Google

### Representative Computing Devices



**Prior Versions**  
(Nov. 2019 – Present)

**New Version**  
(Dec. 2022 – Present)





[1.0] A first zone player comprising:

[1.1] a network interface that is configured to communicatively couple the first zone player to at least one data network;

[1.2] one or more processors;

[1.3] a non-transitory computer-readable medium; and

[1.4] program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

[1.5] while operating in a **standalone mode** in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

[1.6] (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

[1.7] (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

[1.8] after receiving the first and second indications, **continuing to operate in the standalone mode** until a given one of the first and second zone scenes has been selected for invocation;

[1.9] after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

[1.10] based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

[1.0] A first zone player comprising:

[1.1] a network interface that is configured to communicatively couple the first zone player to at least one data network;

[1.2] one or more processors;

[1.3] a non-transitory computer-readable medium; and

[1.4] program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

[1.5] while operating in a **standalone mode** in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

[1.6] (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

[1.7] (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

[1.8] after receiving the first and second indications, **continuing to operate in the standalone mode** until a given one of the first and second zone scenes has been selected for invocation;

[1.9] after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

[1.10] based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.



# Infringement – Assignment

## Asserted Claims

## Accused Google Products

## Version

## Google Infringes?

### '885 Patent Claim 1



**Prior Versions**  
(Nov. 2020 – Present)

**New Version**  
(Dec. 2022 – Present)



### '966 Patent Claims 1, 2, 4, 6, 8



Google

#### Representative Computing Devices



**Prior Versions**  
(Nov. 2019 – Present)

**New Version**  
(Dec. 2022 – Present)



# Infringement – Assignment

## Asserted Claims

## Accused Google Products

## Version

## Google Infringes?

### '885 Patent Claim 1



**Prior Versions**  
(Nov. 2020 – Present)



**New Version**  
(Dec. 2022 – Present)



### '966 Patent Claims 1, 2, 4, 6, 8



#### Representative Computing Devices



**Prior Versions**  
(Nov. 2019 – Present)



**New Version**  
(Dec. 2022 – Present)



[1.0] A computing device comprising:

[1.1] one or more processors;

[1.2] a non-transitory computer-readable medium; and

[1.3] program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:

[1.4] while serving as a controller for a networked media playback system comprising a first zone player and at least two other zone players wherein the first zone player is **operating in a standalone mode** in which the first zone player is configured to play back media individually;

[1.5] receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;

[1.6] based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene;

[1.7] receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player;

[1.8] based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene;

[1.9] displaying a representation of the first zone scene and a representation of the second zone scene; and

[1.10] while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and

[1.11] based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.



[1.0] A computing device comprising:

[1.1] one or more processors;

[1.2] a non-transitory computer-readable medium; and

[1.3] program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:

[1.4] while serving as a controller for a networked media playback system comprising a first zone player and at least two other zone players wherein the first zone player is **operating in a standalone mode** in which the first zone player is configured to play back media individually;

[1.5] receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;

[1.6] based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene;

[1.7] receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player;

[1.8] based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene;

[1.9] displaying a representation of the first zone scene and a representation of the second zone scene; and

[1.10] while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and

[1.11] based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.

## '966 Patent, Claim 2

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**[2.0]** The computing device of claim 1, further comprising program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:

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**[2.1]** while the first zone player is configured to coordinate with at least the second zone player to play back media in synchrony with at least the second zone player, receiving a fourth request to invoke the second zone scene; and

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**[2.2]** based on the fourth request, causing the first zone player to (a) cease to operate in accordance with the first predefined grouping of zone players such that the first zone player is no longer configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player and (b) begin to operate in accordance with the second predefined grouping of zone players such that the first zone player is configured to coordinate with at least the third zone player to output media in synchrony with output of media by at least the third zone player.

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## '966 Patent, Claim 3

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**[3.0]** The computing device of claim 1,



---

**[3.1]** wherein causing storage of the first zone scene comprises causing storage of the first zone scene at a location other than the computing device, and



---

**[3.2]** wherein causing storage of the second zone scene comprises causing storage of the second zone scene at the location other than the computing device.

---



## '966 Patent, Claim 4

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**[4.0]** The computing device of claim 3,



---

**[4.1]** wherein the location other than the computing device comprises a zone player of the first predefined grouping of zone players.

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## '966 Patent, Claim 6

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**[6.0]** The computing device of claim 1,



---

**[6.1]** wherein the first predefined grouping of zone players does not include the third zone player, and



---

**[6.2]** wherein the second predefined grouping of zone players does not include the second zone player.

---



## '966 Patent, Claim 8

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**[8.0]** The computing device of claim 1,



---

**[8.1]** wherein receiving the first request comprises receiving a first set of one or more inputs via a user interface of the computing device,



---

**[8.2]** wherein receiving the second request comprises receiving a second set of one or more inputs via the user interface, and



---

**[8.3]** wherein receiving the third request comprises receiving a third set of one or more inputs via the user interface.

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# Infringement – Conclusion

## Asserted Claims

## Accused Google Products

## Version

## Google Infringes?

### '885 Patent Claim 1



**Prior Versions**  
(Nov. 2020 – Present)

**New Version**  
(Dec. 2022 – Present)



### '966 Patent Claims 1, 2, 4, 6, 8



#### Representative Computing Devices



**Prior Versions**  
(Nov. 2019 – Present)

**New Version**  
(Dec. 2022 – Present)





- Non-Infringing Alternatives
- Technical Comparability
- Technical Importance

# Non-Infringing Alternatives

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**'885 Patent**  
Claim 1

**Non-Infringing Alternatives?**

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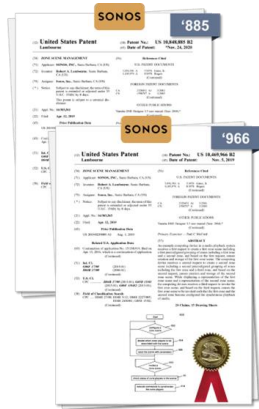
**'966 Patent**  
Claims  
1, 2, 4, 6, 8

**Non-Infringing Alternatives?**

?

# Non-Infringing Alternatives – Requirements

- 1) **Avoids** infringement of the '885 and '966 Patents
- 2) **Commercially** acceptable
- 3) **Available** to Google as of first infringement



## Sonos Patent Documents

- '885 and '966 Patents
- File History
- Claim Constructions



## Google's Proposed Alternatives

- Google's Response to Interrogatory No. 18
- Expert Reports of **Dr. Schonfeld**, Google Expert



## Google Documents and Testimony

- Internal Documents / Emails
- Google Marketing Materials
- Google Promotional Materials
- Testimony of **Tomer Shekel**, a Google Product Manager

**'885 Patent**  
Claim 1

**Non-Infringing Alternatives?**



**'966 Patent**  
Claims  
1, 2, 4, 6, 8

**Non-Infringing Alternatives?**



# Technical Comparability

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# Technical Comparability – Assignment

Case 3:20-cv-06754-WHA Document 754-4 Filed 05/18/23 Page 72 of 88

## Asserted Claims

## IFTTT Applets

## Comparable?

'885 Patent  
Claim 1

'966 Patent  
Claims  
1, 2, 4, 6, 8

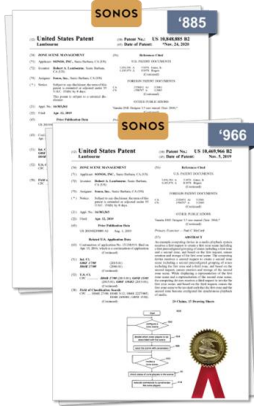


?

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- Must be **sufficiently related** to the case at hand
- Does not require **identity of circumstances**
- Necessarily involves an element of **approximation and uncertainty**



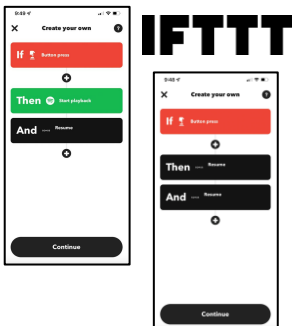
## Sonos Patent Documents

- '885 and '966 Patents
- File Histories
- Claim Construction Material

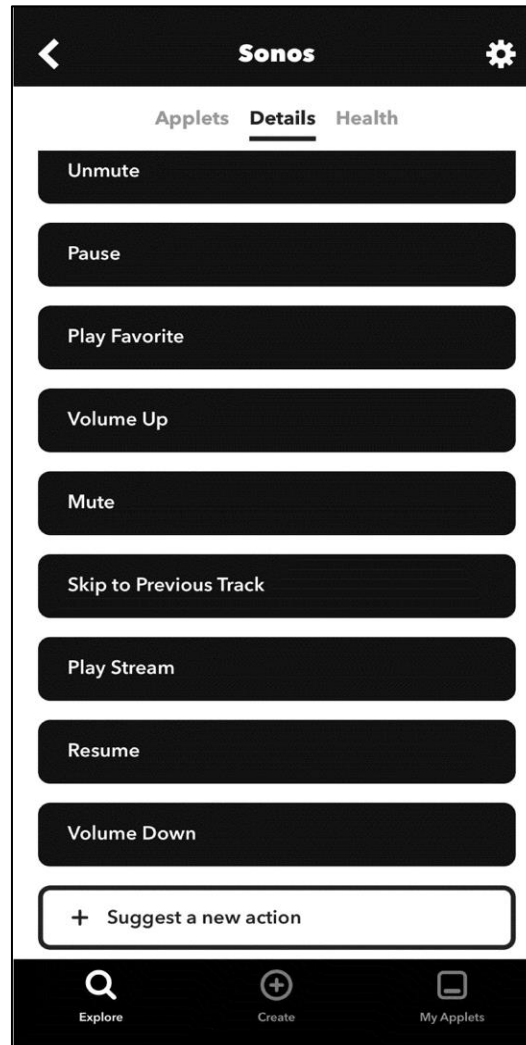


## IFTTT Materials

- IFTTT Documentation
- IFTTT Website
- Testing and Use

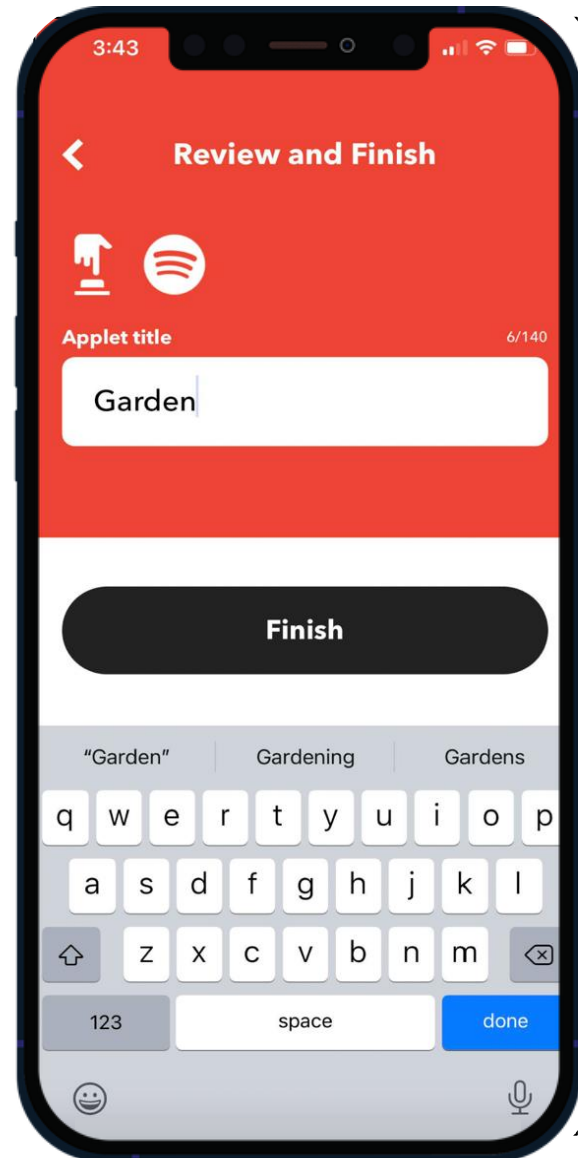
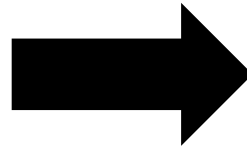


# IFTTT Functionality



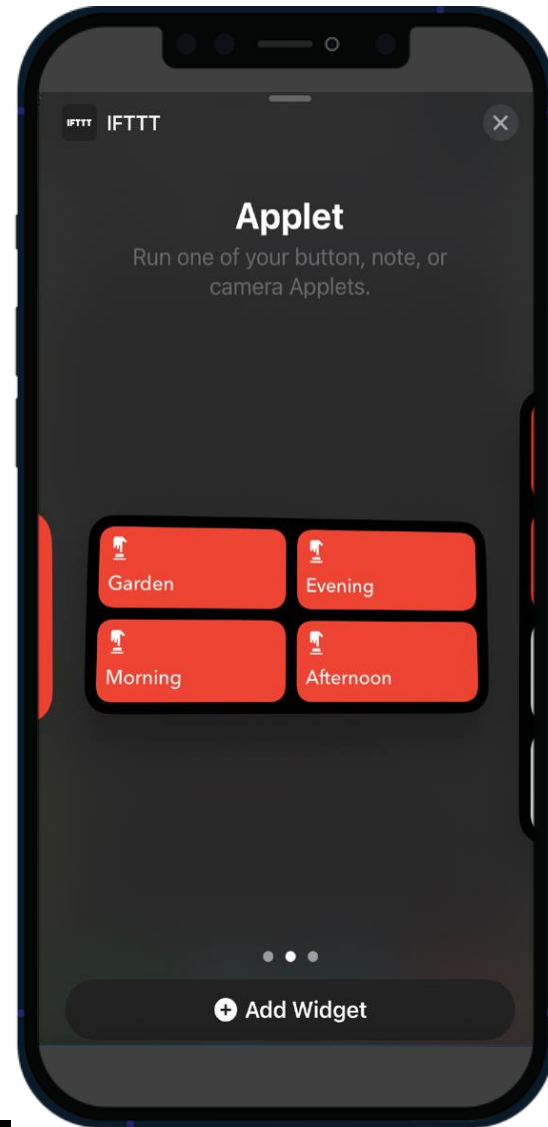
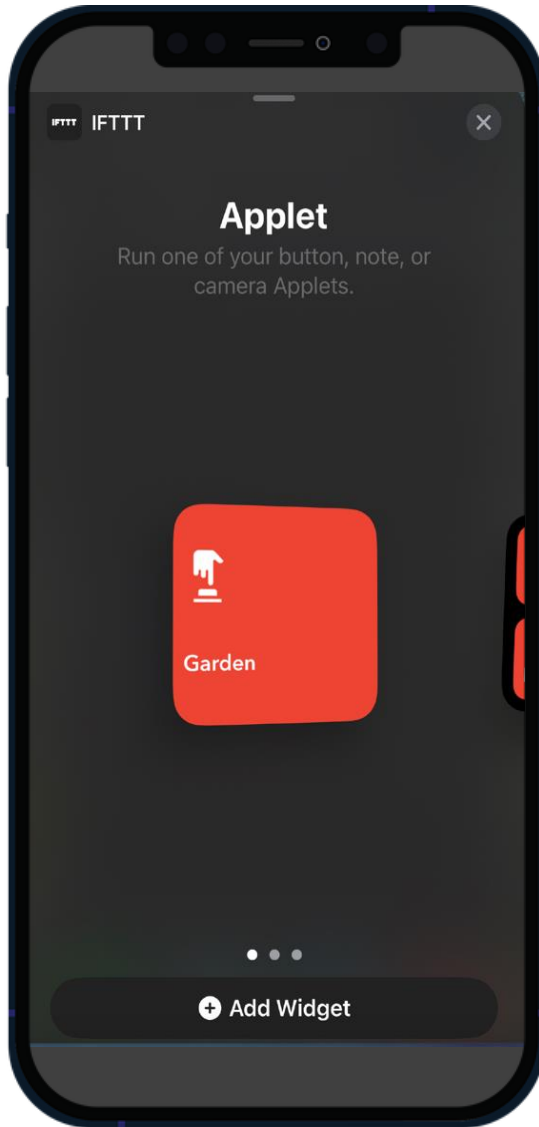
# IFTTT

# IFTTT Functionality



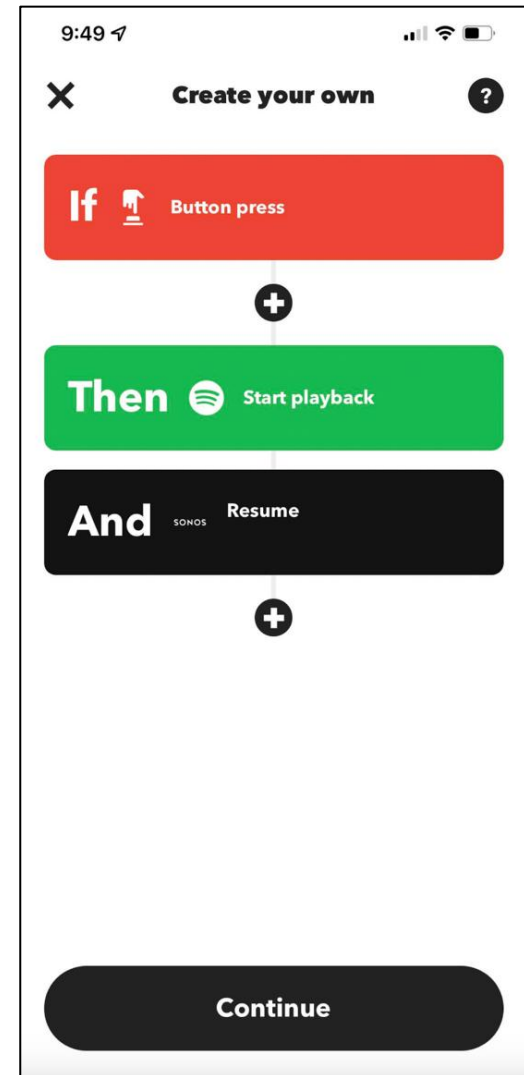
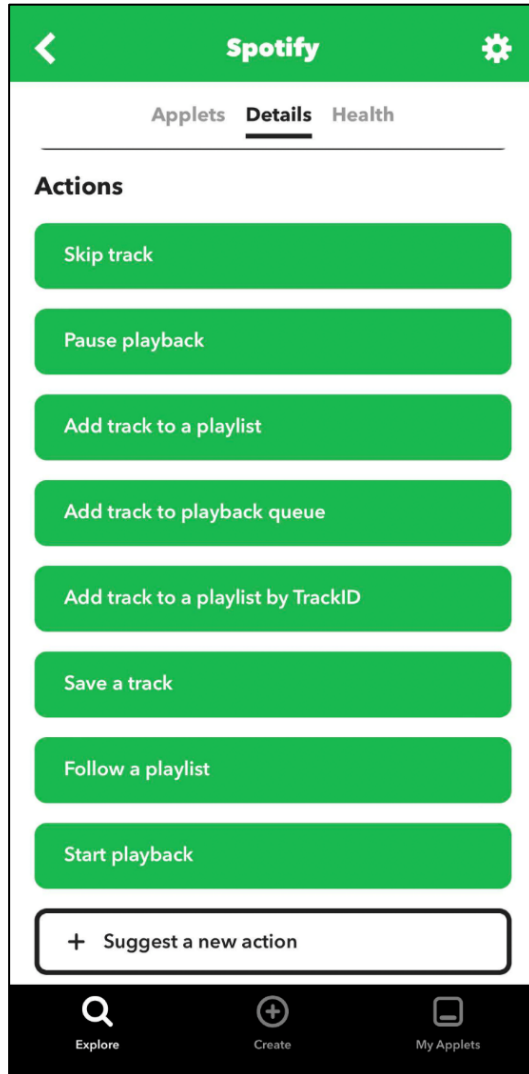
IFTTT


# IFTTT Functionality



# IFTTT


# IFTTT Functionality



- 
- Must be **sufficiently related** to the case at hand
  - Does not require **identity of circumstances**
  - Necessarily involves an element of **approximation and uncertainty**

Case 3:20-cv-06754-WHA Document 754-4 Filed 05/18/23 Page 80 of 88

# Technical Comparability – Conclusion

Asserted Claims	IFTTT Applets	Comparable?
'885 Patent Claim 1		✓
'966 Patent Claims 1, 2, 4, 6, 8		✓



# Technical Importance

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**'885 Patent**  
Claim 1

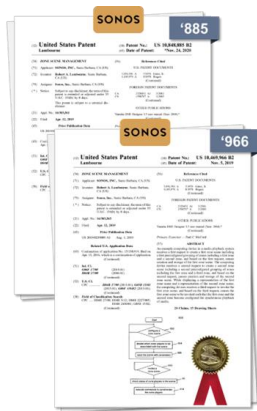
**Technical Importance?**

**?**

**'966 Patent**  
Claims  
1, 2, 4, 6, 8

**Technical Importance?**

**?**



## Sonos Patent Documents

- '885 and '966 Patents
- File History
- Claim Constructions



## Google Documents and Testimony

- Google Marketing Materials
- Google Promotional Materials
- Internal Documents / Emails
- Testimony of Google Witnesses

**'885 Patent**  
Claim 1

**Technical Importance?**



**'966 Patent**  
Claims  
1, 2, 4, 6, 8

**Technical Importance?**



# Tomer Shekel



**Tomer Shekel**  
Product Manager



- Q. Would you say it's an important feature for the music playback to not be disturbed while you set up new groups?
- A. In my opinion, if by setting a group, you'll now be stopping the music a person played, that would not be a great experience for that user.

Deposition of Tomer Shekel, 99:9-16

# Tomer Shekel



**Tomer Shekel**  
Product Manager



- Q. Okay. So turning back to slide 18 of Exhibit 1255, would it be a poor user experience to limit speakers to just one group?
- A. In -- in our -- in our approach, in the Google Cast approach, if we were to have only option that every speaker can only be part of one group, I -- I would think it's a -- it's a poor user experience, yes.

Deposition of Tomer Shekel, 109:11-19

# Tomer Shekel



**Tomer Shekel**  
Product Manager



- Q. Would it be a poor user experience to kick speakers out of a prior group if they're added to a new group?
- A. I feel -- or my opinion at that time was that that would not be a good experience for how Google Cast works, for the reasons I highlighted before when you asked me about the benefits and why we chose this one. So yes, that would not be a good experience, or it will be poor, maybe more specifically.

Deposition of Tomer Shekel, 109:20-110:5

Case No. 3:20-cv-06754-WHA  
Related to Case No. 3:21-cv-07559-WHA

# Sonos v. Google

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Dr. Kevin Almeroth